

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/809,524

DATE: 03/30/2001

TIME: 15:07:40

Input Set : A:\6114N.txt

Output Set: N:\CRF3\03302001\I809524.raw

ENTERED

7 <110> APPLICANT: Pharmacia & Upjohn Company  
11 <120> TITLE OF INVENTION: Salmonella Vaccine Materials and Methods  
17 <130> FILE REFERENCE: 28341/6114.N  
C--> 23 <140> CURRENT APPLICATION NUMBER: US/09/809,524  
C--> 26 <141> CURRENT FILING DATE: 2001-03-15  
29 <150> PRIOR APPLICATION NUMBER: 60/190,178  
32 <151> PRIOR FILING DATE: 2000-03-17  
37 <160> NUMBER OF SEQ ID NOS: 30  
43 <170> SOFTWARE: PatentIn Ver. 2.0  
49 <210> SEQ ID NO: 1  
52 <211> LENGTH: 779  
55 <212> TYPE: DNA  
58 <213> ORGANISM: Salmonella dublin  
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70 agcctttctt tattacttcc cctattaaaa agtggcagtt taggggcegc tcttttacgt 120  
73 aatggcgtgc ttatgtcact tacctttccc atattaccaa tcatttacca gcagaagatt 180  
76 atgatgcata ttggtaaaga ttacagttgg ttagggttag tcaccggaga ggtgattatt 240  
79 ggttttttaa ttgggttttg tgcggcggtt cccttttggg ccgttgatat ggcgggggtt 300  
82 ctgcttgata ctttacgtgg cgcgacaatg ggtacgatat tcaattctac aatagaagct 360  
85 gaaacctcac tttttggctt gcttttcagc cagtttttgt gtgttatttt ctttataagc 420  
88 ggcggcatgg agtttatatt aaacattctg tatgagtcac atcaatattt accaccagg 480  
91 cgtactttat tatttgaccg gcaattttta aaatatatcc aggcagagtg gagaacgctt 540  
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97 gcttttaggtc ttttaaatcg gtgcgcacaa caattgaatg tgtttttctt ctcaatgccg 660  
100 ctcaaaagta tattggttct actgaagctc ctgatctcat tcccttatgc tcttcacac 720  
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130 agcctttctt tattacttcc cttattaaaa agtggcagtt taggggcegc acttttacgt 120  
133 aatggcgtgc ttatgtcact tacctttccg atattaccaa tcatttacca gcagaagatt 180  
136 atgatgcata ttggtaaaga ttacagttgg ttagggttag tcaactggaga ggtgattatt 240  
139 ggtttttcaa ttgggttttg tgcggcggtt cccttttggg ccgttgatat ggcgggggtt 300  
142 ctgcttgata ctttacgtgg cgcgacaatg ggtacgatat tcaattctac aatagaagct 360  
145 gaaacctcac tttttggctt gcttttcagc cagtttttgt gtgttatttt ctttataagc 420  
148 ggcggcatgg agtttatatt aaacattctg tatgagtcac atcaatattt accaccagg 480  
151 cgtactttat tatttgacca gcaattttta aaatatatcc aggcagagtg gagaacgctt 540  
154 tatcaattat gtatcagctt ctctcttccct gccataatat gtatggtatt agccgatctg 600  
157 gcttttaggtc ttttaaatcg gtgcgcacaa caattgaatg tgtttttctt ctcaatgccg 660  
160 ctcaaaagta tattggttct actgaagctc ctgatctcat tcccttatgc tcttcacac 720  
163 tatttggttg aaagcgataa attttatatt tatctaaaag actggtttcc atctgtatg 779  
169 <210> SEQ ID NO: 3  
172 <211> LENGTH: 749

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178 <213> ORGANISM: Salmonella dublin
184 <400> SEQUENCE: 3
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190 gtggatcttt atcgtcatt gccagaggat gaggcgaatc aaatgctggc attacttatg 120
193 cagcatcata ttgatgcgga aaaaaaacag gaagaggacg gtgttacctt acgtgtcgag 180
196 cagtcgcagt ttattaatgc ggttgagcta cttagactta acggttatcc gcatcgtcag 240
199 ttacaacgg cggataagat gtttcgggct aatcagttag tggatcacc ccaggaagaa 300
202 cagcagaaga ttaatttttt aaaagaacaa agaattgaag gagtgctgag tcagatggag 360
205 ggcgtgatta atgcaaaagt gaccattgcg ctaccgactt atgatgaggg aagtaacgct 420
208 tctccgagct cagttgccgt atttataaaa tattcaccac aggtcaatat ggaggccttt 480
211 cgggtaaaaa ttaaggattt aatagagatg tcaatccctg ggttgcaata cagtaagatt 540
214 agtatcttga tgcagcctgc tgaattcaga atggtagctg acgtaccgcg gagacaaaca 600
217 ttctggatta tggacgttat caacgccaat aaaggggaag tggagaagtg gttgatgaaa 660
220 tacccttata agttgatgtt attgttgaca ggactgttat taggagtggg catcctgata 720
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229 <210> SEQ ID NO: 4
232 <211> LENGTH: 749
235 <212> TYPE: DNA
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244 <400> SEQUENCE: 4
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253 cagcatcata ttgatgcgga aaaaaaacag gaagaggatg gtgtaacctt acgtgtcgag 180
256 cagtcgcagt ttattaatgc ggttgagcta cttagactta acggttatcc gcataggcag 240
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262 cagcagaaga ttaatttttt aaaagaacaa agaattgaag gaatgctgag tcagatggag 360
265 ggcgtgatta atgcaaaagt gaccattgcg ctaccgactt atgatgaggg aagtaacgct 420
268 tctccgagct cagttgccgt atttataaaa tattcacctc aggtcaatat ggaggccttt 480
271 cgggtaaaaa ttaagattt aatagagatg tcaatccctg ggttgcaata cagtaagatt 540
274 agtatcttga tgcagcctgc tgaattcaga atggtagctg acgtaccgcg gagacaaaca 600
277 ttctggatta tggacgttat caacgccaat aaaggggaag tggagaagtg gttgatgaaa 660
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283 ggctattttt gcctgagacg ccgtttttg 749
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292 <211> LENGTH: 1052
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298 <213> ORGANISM: Salmonella dublin
304 <400> SEQUENCE: 5
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310 gatgagttat catggaaagg taatgacttc accctttatg ccagacaaat gccattagca 120
313 gaggttttac atctgctctc agagaactat gatacggcta ttactattag ccatttgata 180
316 acagctacat ttagtggaag aattccgcct ggaccaccg tcatattttt gaataacctg 240
319 gcagcacaat atgatttgc taccctgggtt gatggcagca tgttatatgt atatcctgca 300
322 tcgttattaa aacatcagg taccctttc aatattttat ctactggacg gttcattcat 360
325 tacttacgca gccagaatat cctttcatca ccgggatgcg aggttaaaga aattaccggt 420
328 accaaagctg tggaggtgag cgggtgtccc agctgcctga ctcgtattag tcaattagct 480
331 tcagtgtctg ataatgcgtt aatcaaacga aaagacagt cggtgagtgt aagtatatac 540
334 acgcttaagt atgccactgc gatggatacc caataccaat atcgcgatca gtccgtcgtg 600

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337 gttccagggg tcgtgagtgt attgcgtgag atgagtaaaa ccagcgtacc ggcgtcatcg 660
340 acgaacaatg gttcaccgcg tacacaggca ttgcccattgt ttgctgccga cccacgccag 720
343aatgcagtga tcgttcgtga ttatgcggcc aatatggccg ggtatcggaa acttatcaca 780
346gaattagatc aacgccagca gatgatagag atttcggtga aaattatcga tgtaaatgct 840
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352attgcgttca atacagggtt gaatgacggt ggtgctagcg gttttttcaa cggtaatcag 960
355cgataacctca aactttatgg tgcgtttgaa tgccctggaa aaaagctctc aggccttatgt 1020
358actttcccag ccatctgtgg tgactttaaa ta 1052
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373 <213> ORGANISM: Salmonella typhimurium
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391acagctacat ttagtgga aaattccgct ggaccaccgg tcgatatatt gaataacctg 240
394gcagcacaat atgatttgc taccgtgttt gatggcagca tgttatatgt atatcctgca 300
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427attgcgttca atacagggtt gaatgacggt ggtgctagtg gttttttcaa cggtaatcag 960
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445 <212> TYPE: DNA
448 <213> ORGANISM: Salmonella typhimurium
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463aactatcata acggtcgtat tcaattatgt cagatactca agcaaaccct cttagacgaa 180
466gaactgcttt taaagcgtt ggctaactgg aaaccgcag cgttccaggg tattcctcaa 240
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472gccgagctct ggttacgatt acatcatcga caaataaaat ttctggagtc gcaatgcgtt 360
475catggtta 368
478 <210> SEQ ID NO: 8
481 <211> LENGTH: 28
484 <212> TYPE: DNA
487 <213> ORGANISM: Artificial Sequence
493 <220> FEATURE:
496 <223> OTHER INFORMATION: Description of Artificial Sequence: primer

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520 <213> ORGANISM: Artificial Sequence
526 <220> FEATURE:
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544 <210> SEQ ID NO: 10
547 <211> LENGTH: 34
550 <212> TYPE: DNA
553 <213> ORGANISM: Artificial Sequence
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562 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
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580 <211> LENGTH: 49
583 <212> TYPE: DNA
586 <213> ORGANISM: Artificial Sequence
592 <220> FEATURE:
595 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
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613 <211> LENGTH: 49
616 <212> TYPE: DNA
619 <213> ORGANISM: Artificial Sequence
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652 <213> ORGANISM: Artificial Sequence
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661 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
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685 <213> ORGANISM: Artificial Sequence
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745 <211> LENGTH: 46
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850 <213> ORGANISM: Artificial Sequence
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883 <213> ORGANISM: Artificial Sequence
889 <220> FEATURE:
892 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
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VERIFICATION SUMMARY

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Input Set : A:\6114N.txt

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L:23 M:270 C: Current Application Number differs, Replaced Application Number

L:26 M:271 C: Current Filing Date differs, Replaced Current Filing Date